H. St. John.

# Rhodora

JOURNAL OF THE

NEW ENGLAND BOTANICAL CLUB



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# Rhodora

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# Rhodora

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THE NEW ENGLAND BOTANICAL CLUB

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## NOTEWORTHY RHODE ISLAND PLANTS.


S. N. F. Sanford.


Although a botanist's chief pleasure may come through the discovery of new species, the range extension of well-known plants, and the location of unreported stations, add not a little to his enjoyment, and often prove useful. It seems worth while, therefore, to record a few such plants collected by the writer, especially those from certain towns in Newport County which have not been fully covered by local floras.

Sparganium eurycarpum Engelm. Little Compton. In shallow water of a pond. Infrequent.

Potamogeton bupleuroides Fernald. Newport, Middletown and Little Compton. Ponds, under brackish influence. The discovery of the Little Compton station for this plant tends to confirm Prof. M. L. Fernald's suggestion that the *Potamogeton perfoliatus* L. of early R. I. botanists may have been *P. bupleuroides*. Reported by Olney, 1847, from Little Compton and Providence.

Vallisneria americana Michx. Little Compton. Pond, possibly Olney's (1847) original station. Also recorded from Providence and Barrington. A plant of wide range, but far from common.

Echinocloa Walteri (Pursh) Nash. Middletown, Little Compton and Barrington. Sandy marshes near salt water. Apparently frequent along the coast.

Cenchrus carolinianus Walt. Little Compton. Sandy soil, near ocean. Infrequent.

Glyceria septentrionalis Hitchc. Tiverton. Some of the older Mass. and R. I. records for *Glyceria fluitans* (L.) R. Br. may be this species.

Glyceria acutiflora Torr. Tiverton. Occasional, bog holes in woods. Roots freely at the nodes, forming loosely spreading clumps.

Elymus virginicus L. var. halophilus (Bicknell) Wiegand. Prudence Id. (Portsmouth). Salt marshes. Probably not uncommon in its preferred habitat, and doubtless included in older collections with *Elymus virginicus* L., from which it was separated by Bicknell as *E. halophilus*, but more recently changed, by Wiegand, to a variety of *E. virginicus*.

Cyperus Grayii Torr. Little Compton. Sandy shores, near ocean. Recorded from coastal towns of Mass. and R. I., but apparently the stations are few. Recently reported from Westerly, R. I.

Smilax herbacea L. Warren and Bristol. Frequent rather than common. Individual plants in a colony seldom numerous.

Pogonia verticillata (Willd.) Nutt. Tiverton. Open woods and shaded thickets. Probably not common anywhere in New England, and comparatively rare in Rhode Island.

Glaucium flavum Crantz. Prudence Id. (Portsmouth) and Bristol. In beach shingle, on cliffs, and in waste places, on or near the coast. Also reported from Portsmouth, Little Compton, Conanicut Id., and "Mt. Hope Bay," R. I. Prudence Id. may be Olney's original station. Introduced and local.

Rubus rhodinsulanus Bailey. Prudence Id. (Portsmouth), in Narragansett Bay. Dry, open, sandy pastures, forming circular patches, the runners—often 5 or 6 feet long—extending like spokes from the hub of a wheel.

A new species, recently described by L. H. Bailey in Gentes Herbarum, vi. Rubus. Oct., 1925, pp. 233, 242, 243. Somewhat resembles *Rubus arenicola* Blanchard. May not be confined to this island.

Strophostyles helvola (L.) Britton. Prudence Id. and Barrington. Specimens from Jamestown, Newport Co., have also been seen.

Geranium Robertianum L. Tiverton. Rich soil of wooded hillsides. Infrequent.

Cryptotaenia canadensis (L.) DC. Lincoln. Well within its range, but all stations in southern Mass. and R. I. are worth recording.

Cornus canadensis L. Tiverton. Rocky pasture thicket.

Visited several years in succession. Cautious inquiry gave no indication that the plants were not native, and the wildness of the country and the nature of the people were not conducive to the sentiment of transplantation. On the second visit a competent botanist was taken to confirm the record.

Listed from Portsmouth, R. I., nearly forty years ago.

HOTTONIA INFLATA Ell. Tiverton. Stagnant or quiet waters of ponds and streams. Although more than a dozen stations are known in southeastern Mass., the R. I. records for this plant are not numerous.

SAMOLUS FLORIBUNDUS HBK. Bristol. In brackish mud. Notwithstanding the wide and peculiar distribution of this species, the New England stations are comparatively few and scattered.

LIMOSELLA SUBULATA Ives. Little Compton. In sandy mud and shallow water of pond, near ocean. Also reported from the town of Narragansett, and from Providence. A rare and local plant and always interesting.

ASTER CONCOLOR L. South Kingston. Dry, sandy loam of pastures, and on banks of glacial till. Several stations scattered along the South Shore between Wakefield and Westerly. Also recorded from this general region, but farther inland, near Worden's Pond.

A very handsome plant, often with thick, cylindrical clusters of pink-violet flowers changing to deep blue-violet when pressed. The range of this plant—eastern Mass. (including Nantucket), Rhode Island and southward—adds to its interest.

MIKANIA SCANDENS (L.) Willd. Tiverton. Another plant of wide distribution, but not frequently collected.

ONOPORDUM ACANTHIUM L. Prudence Id.: a small colony in barren pasture. Providence: a large colony, in waste ground, east side of the city. Lincoln: a single, villainous looking shrub, 6 or 7 feet tall and nearly as wide, existed, a few years ago, in this town. Apparently an introduction of rare and local occurrence.

BOSTON SOCIETY OF NATURAL HISTORY.

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## THE IDENTITY OF ERIOPHORUM CALLITRIX.

M. L. FERNALD.

ONE of the most characteristic members of *Eriophorum* § *Vaginata* in northeastern America—from Baffinland and Labrador to Athabasca, south on bogs and in spruce swamps to Newfoundland, Nova Scotia, southern New England, the mountains of Pennsylvania, northern Indiana and Wisconsin—is the Harestail, the densely cespitose species which by early American authors was identified

with *E. caespitosum* Host of Eurasia, by later American botanists was called the Eurasian *E. vaginatum* L. (with which *E. caespitosum* Host is synonymous) and which in 1905[1] I identified with *E. callitrix* Cham., a species described from the Asiatic side of Bering Strait.

That the common plant of northeastern America is not identical with the Eurasian *E. vaginatum* (including *E. caespitosum*) is clear. *E. vaginatum* has the bladeless sheaths of the culm more inflated than in the cespitose plant of eastern America, the oblong flowering spike 1–3 cm. long, the anthers 2–3 mm. long, the achenes narrowly obovoid, and the mature denuded rachis 0.9–1.5 cm. long; the common plant of eastern America having the obovoid to subglobose flowering spike 0.8–1.5 cm. long, the anthers 1–2 mm. long, the achenes broadly obovoid, and the mature denuded rachis 0.6–1 cm. long. In 1905 it was thought that the American plant which had long passed as *E. vaginatum* should be identified with *E. callitrix* Cham. from Bering Strait, this conviction gaining strength from the fact that nothing else was known which so closely matched the description and beautiful figure of Chamisso's species.[2] The name *E. callitrix*, to be sure, had been applied in Europe to the very slender plant now generally known as *E. opacum* (Björnstr.) Fernald[3]; but in recent years it has been excluded from European floras and in America has been used exclusively for the common plant of the northeastern bogs and tundra.

In July, 1925, however, while exploring near the Straits of Belle Isle in northwestern Newfoundland, the writer and his companions found themselves in a region where the *Eriophora* of the section *Vaginata* abound: *E. Scheuchzeri* Hoppe, *E. Chamissonis* C. A. Meyer, *E. Chamissonis*, var. *aquatile* (Norman) Fernald, *E. callitrix* of Fernald and other recent American authors, *E. callitrix*, var. *erubescens* Fernald, *E. opacum* (Björnstr.) Fernald; and a seventh and very distinct plant of wet tundra which in some characters suggested the common plant we have been calling *E. callitrix*, in others *E. opacum*, but clearly quite a distinct species from either of them. Always of very low stature (0.5–2 dm. high) and forming the smallest of tufts (1–6 cm. in diameter), with only 1 to 6 culms, the plant was found to be characteristic nearly the length of the south side of the Straits always in regions where the adjacent dry rock-barrens show by their deep mantle of frost-broken and angular residual debris that the

[1] Fernald, Rhodora, vii. 85, 135 (1905).
[2] Chamisso in C. A. Meyer, Mém. Sav. Etrang. Acad. St. Pétersb. i. 203, t. 2 (1831).
[3] Fernald, l. c. 85 (1905).

area was not much modified by the Pleistocene glaciation. From the common cespitose plant of eastern America which has passed as *E. callitrix* the small plant along the Straits of Belle Isle differs at once in having the inflated sheaths of the culms confined to the base of the plant instead of running to the middle of the culms, the spathe and the scales of the spike uniformly blackish and appressed-ascending instead of pale-margined and divergent or even reflexed in age, the anthers at most 1 mm. long, instead of 1–2 mm., the mature fruiting spike turbinate-obovoid and only 1.5–2.3 cm. high, instead of depressed-globose and 2.5–5 cm. in diameter, and the denuded mature rachis with pits opening obliquely upward instead of opening horizontally. From *E. opacum* the lower plant differs by its coarser and stiffer leaves and culms (the slender and delicate culms of *E. opacum* 3–6.75 dm. high), sheaths restricted to the base of the culm and ampliate upward, the upper one usually with a short blade (the more numerous scattered sheaths of *E. opacum* extending nearly to the summit, scarcely inflated and bladeless), the spathe ovate and ribbed nearly to the margin (the narrower spathe of *E. opacum* with broad ribless margin), the bristles brilliant snow-white (in *E. opacum* sordid) and the achenes ellipsoid-obovoid (in *E. opacum* narrowly cuneate-obovoid).

A review of the genus in the light of this species new to the flora of North America leads to the conclusion that this novel plant of northwestern Newfoundland is the species of St. Lawrence Island, fully described and beautifully illustrated as *E. callitrix* Chamisso. Chamisso's description fits it in every particular as do the details of the plate, both of which have been carefully checked with me by Mr. C. A. Weatherby. So long as Chamisso's species was identified with another plant of northeastern America the clarity of his description and plate was not so apparent. Now, however, his presentation of *E. callitrix* becomes convincing and the species takes its place in the long list[1] of plants which divide their ranges between the region of the Gulf of St. Lawrence and the Bering Sea area, a list greatly augmented by the explorations of the past summer. That *E. callitrix* (true) is, indeed, a very rare and localized plant is apparent from the fact that, in spite of the clear description and illustration of it published in 1831, it should have been known to Meinshausen in 1901

[1] See Fernald: *Persistence of Plants in unglaciated Areas of Boreal America*, Mem. Am. Acad. xv. no. 3 (1925.)

only from the original collection: "Hab.: Auf den St. Laurenz-Inseln (nur von *Mertens* gesammelt und mitgebracht)"[1]; and that the Vega-Expedition, in exploring the Arctic coast of Eurasia, should find it only on St. Lawrence Bay, "spärlich . . . Nur von diesen Theil des arktischen Sibiriens her bekannt."[2] That the species should now be found as a member of the relic flora of western Newfoundland is particularly interesting in view of the presence there of such species as *Cerastium Fischerianum* Seringe of the shore of Bering Sea, *Primula sibirica* Jacq., and particularly of *Senecio resedifolius* Less., the type of which came from St. Lawrence Bay.

The common densely cespitose plant of eastern North America, which long passed as *Eriophorum vaginatum* L. and which I have erroneously identified with *E. callitrix*, seems to have no name and it is here proposed as a new species, and since the present study has materially changed our understanding of the characters of the 1-spiked cotton grasses (*Eriophorum* § *Vaginata*), a new key to and brief synopsis of the eastern American representatives of the section are here given.

Key to the eastern american Species of Eriophorum § Vaginata.

*a.* Stoloniferous; culms mostly solitary: empty scales at base of spike chiefly 7 or fewer (Subsection Paucivacua)[3] *b.*

*b.* Flowering spike broadly obovoid to subglobose, 0.8–1.2 cm. long: scales lead-color to blackish, with only slightly paler narrow margins, ovate-lanceolate to lance-attenuate: anthers 1 mm. long: fruiting spike depressed-globose, 2–2.5 cm. high: bristles bright-white.....*E. Scheuchzeri.*

*b.* Flowering spike oblong-cylindric, 1.5–2 cm. long: scales brownish-drab to blackish, with a distinct whitish margin, ovate to ovate-lanceolate, bluntish: anthers 1.5–3 mm. long: fruiting spike obovoid, 2.5–4 cm. long: bristles reddish, cinnamon-color or whitish.....*E. Chamissonis.*

*a.* Cespitose, not stoloniferous; the culms and basal leaves more or less rigid, in tufts or tussocks: empty scales at the base of the spike usually 10–15 (Subsection Multivacua)[4] *c.*

*c.* Spathes and scales of the spike blackish or lead-color, without conspicuous pale margin, appressed-ascending: fruiting spike obovoid, 1.5–2.5 cm. high: achenes 2–2.3 mm. long, 0.5–1.2 mm. broad: pits of the mature de-

[1] Meinshausen: *Die Cyperaceen der Flora Russlands*, Acta Hort. Petrop. xviii. no. 5: 267 (1901).

[2] Kjellman: *Phanerogamenflora an der asiatischen Kuste der Berings-Strasse*, Die Wissenschaftl. Ergebnisse der Vega-Exped. 372 (1883).

[3] Eriophorum § Vaginata Anderss., subsection **Paucivacua**. Section *Paucivacuae* Norman, Christ, Vidensk-Selsk. Forh. (1893), no. 16: 45 (1893).

[4] Eriophorum § Vaginata Andress., subsection **Multivacua.** Section *Multivacuae* Norman l. c. (1893).

nuded rachis opening obliquely upward: plants loosely cespitose, forming tussocks 1–9 cm. in diameter: culms 1–17 *d.*

*d.* Culms slender, 3–6.75 dm. high: sheaths scattered, usually extending high above the middle of the culm, scarcely inflated, bladeless: spathe lanceolate or lance-ovate, with broad ribless margin: bristles sordid.....*E. opacum.*

*d.* Culm stout and stiff, 0.6–2.2 dm. high: sheaths mostly confined to the lower half of the culm; the upper ampliate-inflated and usually bearing a short blade: spathe ovate, ribbed nearly to the margin: bristles bright-white.....*E. callitrix.*

*c.* Spathes and scales lead-colored, with whitish margins, finally divergent or often even reflexed: fruiting spike depressed-globose to broadly obovoid, 2.5–5 cm. in diameter: achenes 2.5–3.5 mm. long, 1.5–2 mm. broad: pits of the mature denuded rachis opening horizontally outward or only slightly ascending: plants forming broad dense tussocks with many culms.....*E. spissum.*

E. Scheuchzeri Hoppe, Bot. Taschenb. 104, App. t. 7 (1800); Fernald, Rhodora, vii. 82 (1905), which see for detailed citations. *E. capitatum* Host. Gram. i. 30, t. 38 (1801). *E. leucocephalum* Bcklr. Flora, xli. 419 (1858).—Arctic regions, south in wet swales and pond-margins to northwestern Newfoundland and southern Alaska.

E. Chamissonis C. A. Meyer in Ledeb. Fl. Alt. i. 70 (1829) as to description for most part, synonymy and citation of Unalaskan specimen, Mém. Sav. Étrang. Acad. St. Pétersb. i. 204, t. 3 (1831), except the Altai plant; Fernald, Rhodora, vii. 83, 133 (1905), which see for detailed citations. *E. intermedium* Cham. ex C. A. Meyer, llcc. (1829, 1831), as synonym, not Bast. *E. vaginatum, β. medium* Laestad. ex Fries, Novit. Mant. ii. 1 (1839), as syn. *E. russeolum* Fries l. c. 2 (1839) as syn. and ibid iii. 170 (1842). *E. Scheuchzeri,* var. *Chamissonis* (C. A. Meyer) F. Nyl. Acta Soc. Sc. Fenn. iii. (1852) and in Anderss. Bot. Not. (1857) 58. *E. medium* Anderss. Bot. Not. (1857) 62. *E. rufescens* Anderss. Bot. Not. (1857) 79. *E. vaginatum,* b. Bcklr. Linnaea, xxxvii. 94 (1871). *E. russeolum,* var. *rufescens* Hartm. Handb. ed. 11: 450 (1879).—Labrador to Alaska, south in wet bogs and margins of pools to central and western Newfoundland, St. Pierre et Miquelon, Nova Scotia, southern New Brunswick, James Bay and Ottawa Valley, Ontario, Lake Huron (*fide* Hooker), Wyoming, Idaho, Washington and Vancouver Island.—The typical form has slender culms 1–5 dm. high and rarely more than 1.5 mm. in diameter, with comparatively short and slender leaves, the bristles ferruginous. The bristles are white in Forma albidum (F. Nyl.) Fernald, Rhodora, xxiii. 131 (1921). Var. *albidum* (F. Nyl.) Fernald, Rhodora, vii. 84 (1905). *E. russeolum,* var. *albidum* F. Nylander, Acta Soc. Sc. Fenn. iii. (1852) and in Anderss. Bot. Not. (1857) 58. *E. russeolum,* var. *candidum* Norm. Ind. Supp. 46 (1864).

Var. **aquatile** (Norman), n. comb. *E. russeolum,* var. *aquatile* Norm. Archiv. Weath. Naturvid. v. 509 (1881). *E. aquatile* Norm.

Christ. Vidensk-Selsk. Forh. (1893) no. 16: 43 (1893). *E. Chamissonis,* subsp. *aquatile* (Norm.) Lindb. fil. Svensk Fanerogamfl. 113 (1918).—A very coarse extreme, with culms 4–6 dm. high and 2–4 mm. in diameter at base: basal leaves coarse and elongate, sometimes about equaling the culms: stolons without bladeless sheaths: empty scales at base of spike often more numerous: bristles paler.—The only American material referred here is from Newfoundland: shallow pool at base of Cape Dégrat, Quirpon Island, August 7, 1925, *Fernald & Long,* no. 27,545.

E. opacum (Björnstr.) Fernald, Rhodora, vii. 85 (1905), which see for many citations. *E. vaginatum,* var. *opacum* Björnstr. Grunddr. af Piteå Lappm. Vaxtfys. 35 (1856). *E. callitrix* Anderss. Bot. Not. (1857) 60; Fries, Bot. Not. (1858) 63; Liebm. & Lange, Fl. Dan. Suppl. t. 122 (1874), a beautiful plate with accurate details.—Straits of Belle Isle, Newfoundland to Alaska, south to Hastings County, Ontario, Saskatchewan, southern Alberta and southern British Columbia; northern Eurasia.

Reports of the plant in New England are due to errors of identification.

E. callitrix Cham. in C. A. Meyer, Mém. Sav. Étrang. Acad. St. Pétersb. i. 203, t. 2 (1831).—Known only from the type region, St. Lawrence Bay on the Asiatic side of Bering Strait, and from the south side of the Straits of Belle Isle, northwestern Newfoundland: peaty margins of pools in limestone barrens back of Big Brook, *Fernald & Long,* no. 27,551; borders of pools in tundra back of Big Brook, *Pease & Griscom,* no. 27,552; moist turfy or peaty depressions in limestone barrens, Cook Point, *Fernald & Gilbert,* no. 27,553; boggy tundra, Schooner (or Brandy) Island, *Pease & Long,* no. 27,554; wet peaty depressions in tundra, Boat Harbor, *Fernald, Wiegand & Long,* no. 27,555; borders of depressions in tundra one mile back of Savage Cove, *Fernald, Pease & Long,* no. 27,556.

**E. spissum,** n. sp., planta densissime arctissime caespitosa, caespite 1–6 dm. diametro; culmis numerosis erectis subrigidis trigonis apice subscabris 1.5–7 dm. altis infra vel rarius supra medium vaginis 1–2 inflatis remotis dispositis; foliis filiformibus trigonis scabris vaginis deinde fibrillosis; spica obovoidea vel subglobosa 0.8–1.5 cm. alta deinde depresso-globosa 2.5–5 cm. diametro; squamis obovatis vel ovato-lanceolatis longe acuminatis nigrescente-cinereis margine pallidis inferioribus divergentibus vel reflexis; antheris 1–2 mm. longis; achaeniis obovoideis 2.5–3.5 mm. longis 1.5–2 mm. latis; setis candidis; foveis rhacheos denudatae plerumque divergentibus.—*E. caespitosum* Pursh, Fl. Am. Sept. i. 57 (1814), not Host. *E. vaginatum* Torr. Fl. 65 (1824) and later Am. auth., not L. *E. callitrix* Fernald, Rhodora, vii. 85 (1905), not Cham.—Bogs, tundra and mossy swamps, Baffinland and Labrador to Athabasca, south to Newfoundland, Nova Scotia, southern New England, mountains of

Pennsylvania, northern Indiana and Wisconsin. The following, selected from an extensive representation, are characteristic. BAFFINLAND: American Harbor, Cumberland Gulf, 1877–78, *Krumlein;* LABRADOR: Kangalaksiorvik Bay, *Owen Bryant*, no. 39; Tub Harbor, *Sornborger*, no. 280; Blanc Sablon, *Fernald & Wiegand*, no. 2734. NEWFOUNDLAND: swales on limestone barrens, Sandy (or Poverty) Cove, July 25, 1925, *Fernald, Long & Gilbert*, no. 27,557 (TYPE in Gray Herb.); Quarry, *Fernald & Wiegand*, no. 4721; Millerton Junction, *Fernald & Wiegand*, no. 4722; Balena, *Wm. Palmer*, no. 1338. QUEBEC: Lagorgendière, *St. John*, no. 90,196; Natashquan, *Victorin & Rolland*, no. 18,138; Tabletop Mts., *Fernald & Smith*, no. 25,604; Mt. Albert, *Fernald & Collins*, no. 173; Knowlton, Brome Co., May 27, 1923, *C. H. Knowlton.* NEW BRUNSWICK: Bass River, Kent Co., 1869, *Fowler.* NOVA SCOTIA: Grand Lake, Sydney, July 5, 1909, *J. R. Churchill;* Yarmouth, *Howe & Lang*, no. 44. MAINE: Fort Kent, *Fernald*, no. 2090; Orono, *Knight*, no. 89; Rumford, May, 1890, *Parlin;* Cutler, July 3, 1902, *Kennedy et al.;* Sargent's Mt., Mt. Desert I., June 16, 1890, *Rand;* Matinicus, *C. A. E. Long*, no. 22. NEW HAMPSHIRE: Colebrook, *Pease*, no. 10,929; Lake of the Clouds, Mt. Washington, *Wm. Boott et al.;* Mt. J. Q. Adams, *Pease*, no. 10,239; Derry, May 10, 1913, *C. F. Batchelder;* top of Mt. Monadnock, *H. D. Thoreau et al.* VERMONT: summit of Mt. Mansfield, *Pringle et al.* MASSACHUSETTS: Tewksbury, *E. Tuckerman et al.;* Chestnut Hill, May 17, 1896, *E. F. Williams;* Canton, *Blake*, no. 56; Provincetown, *Fernald & Long*, no. 18,070; Charlton, May 20, 1899, *Harper;* Granville, *F. C. Seymour*, no. 139; Washington, May 31, 1909, *Hoffmann.* RHODE ISLAND: Glocester, May 19, 1904, *Collins.* CONNECTICUT: Willington, June 13, 1906, *Bissell;* Middlebury, May 14, 1901, *Harger.* NEW YORK: Mt. McIntyre, *House*, no. 9495; Norfolk, *Phelps*, no. 198; Pecksport, *Maxon*, no. 6188; Cortland, *Eames*, no. 3595. PENNSYLVANIA: Pocono Mountain, May 31, 1865, *Traill Green;* Tannersville, May 30, 1902, *Canby.* UNGAVA: Great Whale River, *Low*, no. 63,278. ONTARIO: Mer Bleue, *Victorin*, no. 59; Edmonton, *Jas. White*, no. 11,469. MICHIGAN: Keweenaw Co., *Farwell*, no. 550; Turin, June 4, 1901, *Barlow;* Agricultural College, June 6, 1893, *Hicks & Wheeler.* INDIANA: Garrett, *Deam*, no. 3005. WISCONSIN: Milwaukee, May, 1844, *Lapham.* KEEWATIN: Churchill, *J. M. Macoun*, nos. 79,222, 79,224. ATHABASCA: Island Creek, Peace River, *J. M. Macoun*, no. 59,541.

E. SPISSUM, var. **erubescens** (Fernald), n. comb. *E. callitrix*, var. *erubescens* Fernald, RHODORA, vii. 85 (1905).—Fruiting spikes broadly obovoid, scarcely depressed-globose as in typical *E. spissum;* scales less reflexed at maturity; bristles brown to coppery red: pits of denuded rachis opening obliquely upward.—Newfoundland and adjacent southern Labrador.

The tendency of the pits of the rachis to ascend and the accompanying tendency to less depressed fruiting spikes along with the highly

colored bristles suggest the possible specific distinctness of var. *erubescens*. The achenes, however, seem inseparable from those of typical *E. spissum* although they are sometimes inclined to be more slender. No flowering specimens of var. *erubescens* have been seen and the anthers are not known the plant being already in full maturity in July when botanists usually visit Newfoundland.

In my earlier treatment the species here called *Eriophorum spissum* was made to include *E. brachyantherum* Trautv. & Meyer in Middend. Reise,—Fl. Ochot. 98 (1856) and also a plant of the Altai which had been distributed by C. A. Meyer as *E. Chamissonis*. The latter plant is, however, as clearly pointed out by Meinshausen, a non-cespitose and stoloniferous species, *E. altaicum* Meinsh.,[1] related to but distinct from *E. Chamissonis* as represented by Chamisso's material. *E. brachyantherum*, likewise, does not belong with the eastern American *E. spissum*, having the scales of the spike appressed-ascending and uniformly blackish and very delicate leaves as long as the culms.[2]

Gray Herbarium.

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## CLADONIA APODOCARPA; A NEW SPECIES.

C. A. Robbins.

In almost any region there may be found localities quite entirely possessed by a varying intermixture of *Cladonia* species. In Plymouth County, for instance, a typical colony of old abandoned fields is likely to include species such as *subcariosa*, *pyxidata*, *chlorophaea* and *strepsilis*. Another species also likely to be found associated and always occurring in a sterile condition locally is *foliacea*.

Excepting the last, the various species forming these colonies are represented by plants in all stages of development from sterile primary squamules to fully evolved forms and hence the attention of the collector will be as often concerned with the thallus of these species as with clusters of plants having more or less fully developed podetia. But in attempting to refer all patches of squamules to the species to which each properly belongs he frequently will meet with a characteristic little plant, represented only by a thallus, which is

[1] Meinsh. l. c. 267 (1901).
[2] See Meinsh. l. c. 269 (1901).

not referable to any of the species composing the colony. The squamules are somewhat similar in shape to those of *Cl. foliacea* var. *alcicornis* (Lightf.) Schaer. but they are grayish, not yellowish, less coriaceous, smoother, thinner, as a rule smaller, and their reaction to caustic potash is quite different. Indeed they present no decided likeness to the primary squamules of any other species. Those of *Cl. turgida* (Ehrh.) Hoffm. have a somewhat similar chemical reaction but they are larger and coarser.

The plant is widely distributed as the stations so far found for it show. It is distinctive and readily recognizable when once acquaintance is made with it. Throughout the Buzzards Bay region it is common to abundant; not only occurring mixed with other species but often forming colonies by itself. In the hill pastures of the White Mountains, or at least in those in the vicinity of Jackson, New Hampshire, it is almost equally common and Dr. S. F. Blake has found it well established in eastern Maryland and eastern Virginia. It should therefore be recognized as a species.

**Cladonia apodocarpa** sp. nov.; primary squamules medium size to large, the segments broad to oblong with sinuate, entire margins, above ashy-glaucescent, KOH + (yellowish); below white, smooth, KOH + (pale yellow); podetia wanting; apothecia sessile on the surface or margins of the squamules, brown becoming blackish. On sand, sandy loam, more rarely on humus; in old fields and pastures, exposed sandy banks, etc.

Specimens from Wareham, Massachusetts have been deposited in the Farlow Herbarium at Cambridge and in the United States National Museum at Washington, D. C.

Onset, Massachusetts.

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## EXCURSION TO SOUTHERN VERMONT.

Clarence H. Knowlton.

The New England Botanical Club had a field excursion in southern Vermont, June 19–20 of this year, with headquarters at Wilmington. Only five men attended, Messrs. J. R. Churchill, D. S. Carpenter, F. W. Hunnewell, C. H. Knowlton and H. K. Svenson.

Messrs. Knowlton and Churchill stopped in Vernon and Brattleboro the first day, the latter place furnishing a fine series of rich woods plants. June 20 all visited the towns of Searsburg and Woodford in

the heart of the Green Mts. This area was at first apparently covered with red spruce and hardwood, especially beech and birch, but the forest has been largely depleted by lumbering. *Pyrus americana*, *Amelanchier Bartramiana*, *Sambucus racemosa*, and *Strepiopus amplexifolius* were characteristic plants of the upland, which had an elevation around 2300 feet above the sea.

It was exactly the right season for collecting *Carices*, even the little ones of the *Carex stellulata* group being in perfect condition. Around "Big Pond," so-called, at 2263 feet, was a great abundance of *C. lenticularis* in its prime, also *C. Michauxiana*, enough for all the herbaria of the world. *Lycopodium inundatum* was also abundant here. In the wet shore thicket *Rhododendron nudiflorum* (L.) Torr., var. *roseum* (Lois.) Wiegand[1] was occasional. In another swampy area was *Myrica Gale*, var. *subglabra*, not before reported from Vermont. It grew in abundance, with the typical form.

Lower down at about 1700 feet, in a dry field above the Deerfield river in Searsburg, grew a large quantity of *Vaccinium caespitosum*, previously reported from the region by the late W. H. Blanchard. We were much surprised to find that this species as well as *Amelanchier Bartramiana* were protected by the very inclusive Vermont statute against grasping botanists and greedy nurserymen. Along the river itself was an abundance of *Sanguisorba canadensis*.

Messrs. Hunnewell and Svenson, approaching the region from the west, found *Hydrophyllum virginianum*, *Senecio oboratus*, and other plants characteristic of the Western Vermont calcareous regions.

In order to get a really satisfactory representation of the flora for the Club Herbarium on an excursion of this sort, there should be at least two days for field work, besides the days of arrival and departure. It would be much better, too, to have at least six or eight men in attendance. However, we sampled the flora quite thoroughly along the main road, and added much to our knowledge of southern Vermont.

Hingham, Massachusetts.

[1] Wiegand, Rhodora, xxvi. 4 (1924).

# GRIER'S NOTES ON THE FLORA OF LONG ISLAND.[1]

Norman Taylor.

Two botanical journals have been carrying for some months a series of papers on the flora of Long Island. The value of these is practically *nil* and the publication of them should have been declined. The bibliographical footnote discloses not only shortcomings upon the author's part, but an editorial leniency, or carelessness, matched only by the spelling and imperfect bibliography in the main body of the work. More than two score errors of this sort could be enumerated, were there space or inclination to publish such a list. But the actual statements about the plants of the island challenge attention.

Under the general heading "The Native Flora of the Vicinity of Cold Spring Harbor, L. I., N. Y." four things are incorrect: (1) Many of the plants are not native, as particulars below specify; (2) "Flora" is incorrect since scores of garden or specimen plants on private estates are included: (3) by no means all occur, even by stretching one's notion of the "vicinity" of Cold Spring Harbor, anywhere near this locality: (4) in the text (page 24 of the reprint) the author says that besides other sources he has included "all those species *apt* to be encountered by members of the Laboratory." The italics are mine. To allow such a mixture of ideas to appear under the title "Native Flora" is to put serious students of the flora of the island to the wholly needless burden of checking through

[1] Grier, N. M. Unreported plants from Long Island. I. Pteridophyta and Spermatophyta. Torreya **24:** 71–76. 28 O 1924. [Reprint dated 1994.]

———— Unreported plants from Long Island, N. Y. II. Cryptogams exclusive of Pteridophyta. Torreya **25:** 5–11. Ja–F 1925.

———— Unreported plants from Long Island, N. Y. II. Cryptogams—Part 2. Torreya **25:** 29–35. Mr–Ap 1925.

———— The native flora of the vicinity of Cold Spring Harbor, N. Y. Schizophyta, Myxomycetes, Dinoflagellatae, Bacillariophyta. Am. Midl. Nat. **9:** 245–256. S–N 1924.

———— The native flora of the vicinity of Cold Spring Harbor, N. Y. (Continued). Am. Midl. Nat. **9:** 283–318. Ja 1925.

———— II. Pteridophyta. (Continued). Am. Midl. Nat. **9:** 384–437. My 1925. [Presumably part of the series on Cold Spring Harbor, but there is nothing to indicate this in table of contents, or article heading. Includes, beside Pteridophyta, all flowering plants.]

———— The fossil flora of the vicinity of Cold Spring Harbor, Am. Midl. Nat. **9:** 513–527. Jl 1925. [Includes besides fossil species a section on Insect Galls.]

———— The geology of Long Island with especial reference to the Cold Spring Harbor region and its flora. Am. Midl. Nat. **9:** 531–563. S 1925.

The papers from the American Midland Naturalist, not in their original order, with new page numbers (1–265, one-half blank) and no date were reprinted as "The Native Flora of the Vicinity of Cold Spring Harbor, L. I., New York." Contribution no. 8 from the Biological Laboratory, Cold Spring Harbor, N. Y.

hundreds of such records on the off chance that some wheat may turn up among the chaff.

To particularize with thoroughness would try the patience of the editors and readers of Rhodora, as it has already exhausted that of several workers on the flora and vegetation of Long Island. A few examples will suffice:

"*Vaccinium Vitis-Idaea.* Rocky soil, Bayville, L. I.—N. M. G." Finding that plant on Long Island would be comparable to the recent discovery of *Empetrum nigrum* at Montauk.[1] William C. Ferguson Esq., of Hempstead, an enthusiastic and accurate student of the flora of the island wrote for particulars to Dr. Grier, who referred to a card catalog of species at the laboratory, merely recording the extraordinary "find" as it is printed above. There is no specimen, and the author attached so little importance to reporting this arctic-alpine species from Long Island, that he was vague, to say the least, in attempting to substantiate the record.

"*Thuja occidentalis* . . . White Cedar Swamp, Merrick, L. I." This tree is unknown, outside of cultivation, on Long Island. Merrick is in the town of Hempstead, on the south shore of the island, and separated from the Cold Spring Harbor region by the ecologically different vegetation of the Hempstead Plains. Merrick, Ronkonkoma, and other localities which the author particularizes have no more to do with the vicinity of Cold Spring Harbor than Montauk. Many species should be cut from the list, notably those recorded from the Plains, pine barren bogs, and the pitch pine barrens of the interior of the island,—hardly geographically, and certainly not floristically, the "vicinity" of Cold Spring Harbor.

Perhaps the worst feature of the lists is the inclusion of many species wholly unknown as wild plants, on Long Island and, of course, not native. On the Havemeyer, DeForest, Love, Hodenpyl, and Frank Bailey estates, as well as some others, there have been skillful and successful attempts to cultivate rare, or beautiful, or interesting plants. Upon what theory the author selected some of these for inclusion in his lists of native or unreported plants of Long Island, no one can guess. *Ledum groenlandicum, Sarracenia flava, Trillium grandiflorum, Hexastylis virginica, Sibbaldiopsis* (*Potentilla*) *tridentata, Amorpha fruticosa, Calluna vulgaris, Paulownia tomentosa* and *Centaurea cyanus* indicate a cheerful inclusiveness in the author's point of view as to the material coming within the scope of local flora studies.

For a good many years Mr. Hicks has maintained a large and successful nursery at Westbury, but no one would be more surprised than he to see *Pachysandra procumbens* and *Euonymus atropurpureus* selected from his list of garden plants for inclusion in a native flora of Cold Spring Harbor. Both of these are credited to the nursery,

[1] Taylor, N. & Hill, H. S. The crowberry at Montauk, Long Island. Torreya 24: 87. 28 O 1924.

which is miles from Cold Spring Harbor, on the Hempstead Plains. The former is also credited to the DeForest place.

Inaccuracy as to plant names and place names characterizes all the lists. Such work naturally stirs suspicion that some records are incorrect, or that plants may have been misidentified.

*Millegrana Radiola*, for instance, is recorded in Gray's Manual only from "Ditches, Louisburg, Cape Breton," yet it is said to be in "Vicinity, Cold Spring Harbor." No one, not even Jelliffe, who was almost as inclusive as Dr. Grier, has recorded this rare introduced plant from Long Island.

Among the records of Hollick and Jeffrey of fossil plants, Dr. Grier has included scores that are so far reported only from Staten Island, and he cites them so. Why he or the editors admit them into a native flora of Cold Spring Harbor may be known to them. To others their inclusion looks very like useless consumption of printer's ink.

American botanists have lately been accused of an excessive politeness in their criticisms of current botanical literature. Notwithstanding the accusation, the reviewer attempted the desperate expedient suggested by Rose and Stevens in Science n. s. **61**: 656–657. 26 Je 1925. He wrote to one of the editors suggesting a curb,—not a drastic one, but some sort of a curb. Nothing happened except a continuance of the flood. Under such circumstances excessive politeness must make way for reviews like this, the writing of which, while not precisely a pleasure, becomes a duty.

Brooklyn Botanic Garden.

*Vol. 27, no. 323, including pages 189 to 200, was issued 26 December, 1925*

## ERRATA

Page 2, line 4, *for* Spach., *read* Spach,
" 6, " 11, for *solonis* read *Solonis*
" 31, " 13, *for* Dod, *read* Dod.,
" 42, " 9 from bottom, *for* polleniferous *read* polliniferous
" 49, " 25, for *leonis* read *Leonis*
" 52, " 19, for *Phyllococe* read *Phyllodoce*
" 66, " 11, for *Turriis* read *Turritis*
" 68, " 8, for *stritca* read *stricta*
" 68, " 31, for *spicta* read *spicata*
" 81, " 25, for *Urisema* read *Unisema*
" 117, " 54, FOR f. *strigosifolia* READ var. *strigosifolia.*
" 158, " 29, for *terrestre* read *terrestris*
" 171, " 29, *for* (Pursh) *read* (Adams)
" 176, " 26, *for* au-dessous *read* au-dessus
" 181, " 8, for *segata* read *segeta*
" 183, " 15, for **mississipiense** read **mississippiense**
" 186, " 4, from bottom, for *Lepidum* read *Lepidium*
" 195, " 22, *for* was *read* were
" 195, " 32, *for* lamine *read* lamina

# INDEX TO VOLUME 27.

**New scientific names are printed in full-face type.**